



[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA-2012-0812; Notice No. 13-01]

RIN 2120-AK14

**Requirements for Chemical Oxygen Generators Installed on Transport Category
Airplanes**

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This rulemaking would amend the type certification requirements for chemical oxygen generators installed on transport category airplanes so the generators are secure and not subject to misuse. The intended effect of this action would be to increase the level of security for future transport category airplane designs. This proposal does not directly affect the existing fleet.

DATES: Send comments on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Send comments identified by docket number *[Insert docket number from heading]* using any of the following methods:

- **Federal eRulemaking Portal:** Go to <http://www.regulations.gov> and follow the online instructions for sending your comments electronically.

- Mail: Send comments to Docket Operations, M-30; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE, Room W12-140, West Building Ground Floor, Washington, DC 20590-0001.
- Hand Delivery or Courier: Take comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: Fax comments to Docket Operations at 202-493-2251.

Privacy: The FAA will post all comments it receives, without change, to <http://www.regulations.gov>, including any personal information the commenter provides. Using the search function of the docket website, anyone can find and read the electronic form of all comments received into any FAA dockets, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the Federal Register published on April 11, 2000 (65 FR 19477-19478), as well as at <http://DocketsInfo.dot.gov>.

Docket: Background documents or comments received may be read at <http://www.regulations.gov> at any time. Follow the online instructions for accessing the docket or Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Jeff Gardlin, Airframe and Cabin Safety Branch, ANM-115, Transport Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, Northwest Mountain Region, 1601 Lind Avenue SW,

Renton, WA 98057-3356; telephone: (425) 227-2136; e-mail: jeff.gardlin@faa.gov.

For legal questions concerning this action, contact Douglas Anderson, Federal Aviation Administration, Office of the Regional Counsel, ANM-7, Northwest Mountain Region, 1601 Lind Avenue SW, Renton, WA 98057-3356; telephone: (425) 227-2166; e-mail: douglas.anderson@faa.gov.

SUPPLEMENTARY INFORMATION:

See the “Additional Information” section for information on how to comment on this proposal and how the FAA will handle comments received. The “Additional Information” section also contains related information about the docket, privacy, the handling of proprietary or confidential business information. In addition, there is information on obtaining copies of related rulemaking documents.

Authority for this Rulemaking

The FAA’s authority to issue rules on aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency’s authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, “General requirements.” Under that section, the FAA is charged with prescribing regulations required in the interest of safety for the design and performance of aircraft; regulations and minimum standards in the interest of safety for inspecting, servicing, and overhauling aircraft; and regulations for other practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This

regulation is within the scope of that authority because it would prescribe new safety standards for the design of transport category airplanes.

List of Abbreviations and Acronyms Frequently Used in This Document

AC – Advisory Circular
AD – Airworthiness Directive
ARAC – Aviation Rulemaking Advisory Committee
ARC – Aviation Rulemaking Committee
COG – Chemical Oxygen Generator
LOARC – Lavatory Oxygen Aviation Rulemaking Committee
SaO₂ – Blood Oxygen Saturation Level
SFAR – Special Federal Aviation Regulation

I. Overview of the Proposed Rule

This proposed rule would adopt new standards for COGs installed in transport category airplanes. These proposed new standards, based on the LOARC's recommendations, would apply to future applications for type certificates, address potential security vulnerabilities with those devices, and provide performance-based options for acceptable COG installations.

II. Background

The incorporation of security measures into an airplane design is a significant development in aviation safety that was initiated over 20 years ago. The International Civil Aviation Organization (ICAO) adopted standards to address several key elements of airplane design to reduce its vulnerability to terrorist acts following the bombing of a Pan American 747 airplane near Lockerbie, Scotland in 1988. These standards were adopted as Amendment 97 to Annex 8 of the 1944 Convention on Civil Aviation.

In January 2002, the FAA adopted the first regulations that address security vulnerabilities in airplanes. The FAA later incorporated all of the ICAO standards into regulations by Amendment 25-127 to Title 14, Code of Federal Regulations (14 CFR) part

25. That amendment complemented other rulemaking initiatives that address security measures for flightdeck doors and added a new § 25.795, Security considerations. ICAO does not have recommended practices related to COGs. Nevertheless, the FAA has determined that COGs present an unacceptable vulnerability and has exercised its authority to take remedial action to correct this vulnerability in airplane design.¹

The FAA became aware of a security vulnerability with certain types of oxygen systems installed inside the lavatories of most transport category airplanes operating under 14 CFR part 121, as well as certain airplanes operating under part 129. As a result, in April 2011, the FAA issued AD 2011-04-09, mandating that these oxygen systems be rendered inoperative until the vulnerability could be eliminated.² However, by rendering the oxygen systems inoperative to comply with the AD, the airplanes do not comply with the requirements of §§ 25.1447, 121.329, and 121.333. The AD contained a provisional allowance to permit noncompliance in the lavatories from those specific requirements.

To further address that situation, the FAA also issued SFAR 111³ to allow continued operation, delivery, and modification of affected airplanes, despite their non-compliance with the above-noted regulations. The AD and the SFAR (while still in effect) are interim measures to minimize the disruption to air commerce while the development of permanent solutions, including this proposed rule, are underway.

In addition, the FAA chartered the LOARC shortly after issuing SFAR 111. The LOARC was tasked to make recommendations for new standards that would ensure the

¹ For example, the FAA has issued ADs to address issues with reinforced flightdeck doors that would not otherwise affect safety.

² FAA originally notified carriers in February 2011 and required immediate compliance. The AD was issued in March 2, 2011 with a compliance date of March 14, 2011. *See* AD 2011-04-09, Airworthiness Directives: Various Transport Category Airplanes Equipped with Chemical Oxygen Generators Installed in a Lavatory, Docket No. FAA-2011-0157.

installation of a safe and secure COG system, including the best approach to implement those standards. The LOARC's recommendations also included the key issues involved in making a COG secure, and a summary of how those issues may affect implementation of new standards. The LOARC's recommendations are discussed in the "Lavatory Oxygen Aviation Rulemaking Committee" section of this NPRM. Those LOARC recommendations also form the basis for this proposal.

A. Lavatory Oxygen Systems

The minimum performance requirements for oxygen supply and oxygen mask presentation are contained in §§ 25.1443 and 25.1447. The supplemental oxygen systems are necessary safety equipment in the event of loss of cabin pressure. Each occupant is required to have a supplemental oxygen supply immediately available if cabin pressure drops to a certain level. The regulations specifically require lavatories to be equipped with two oxygen masks connected to oxygen supply terminals and, for airplanes flying above 30,000 feet, automatic presentation of the masks to the occupants. Two masks are required inside a lavatory to address the situation where one person may be assisting another, such as an adult assisting a small child. The quantity of oxygen available to each occupant is based on the route flown and how quickly the airplane can descend to an altitude that does not require supplemental oxygen.

Lavatory oxygen systems are generally similar to the systems provided for passenger and flight attendant use in the cabin. The intent of the supplemental oxygen requirements in 14 CFR part 25 is reinforced in the operational requirements of §§ 121.329 and 121.333, although neither section specifically references lavatories.

³ SFAR 111, Security Considerations for Lavatory Oxygen Systems (76 FR 12550, March 8, 2011), Docket No. FAA-2011-0186.

The regulations do not specify the use of COGs as an oxygen supply. However, COGs are common because they tend to provide a sufficient oxygen supply while retaining the optimum size, weight, and maintainability for most operations. Because COGs produce oxygen through a chemical reaction that generates heat, there are requirements in § 25.1450 to ensure that adjacent materials and systems are protected from damage and persons are protected from injury. Surface temperatures can reach temperatures up to 500 degrees Fahrenheit, so the COG often has a protective shroud installed.

B. Safety Ramifications

In issuing AD 2011-04-09 and SFAR 111, the FAA carefully considered the safety ramifications of removing supplemental oxygen from the lavatories of a significant portion of the commercial fleet. The FAA conducted a risk analysis to assess the safety implications of temporarily⁴ not having supplemental oxygen available inside lavatories. To support the risk assessment, earlier studies involving passengers' use of supplemental oxygen were reviewed.

Several years ago in an unrelated initiative, the FAA tasked the ARAC to make recommendations for safety standards when airplanes operate in high altitudes. As part of its efforts, the ARAC did a comprehensive assessment of the frequency and nature of the need for supplemental oxygen systems in service.⁵ The ARAC identified 2,800 instances over a 40-year period and categorized them by cause, severity, and consequence. The majority of these instances were caused by malfunctions of the cabin pressurization system. However, in none of those 2,800 instances was there a loss of life due to lack of oxygen. The ARAC

⁴ See AD 2012-11-09, Various Transport Category Airplanes (77 FR 38000, June 26, 2012).

used these data to make recommendations to the FAA for future rulemaking not related to this action.

The FAA reviewed the service history since those ARAC recommendations were made and found that the types and frequencies of incidents, as well as their causes, are consistent with the historical record. The relative risks and service history have not changed in any significant way since the ARAC recommendations were issued. With respect to SFAR 111, the assessment was limited to the lavatories, as opposed to the earlier ARAC task that applied to the entire airplane. The lavatories are sporadically occupied during flight and by a small number of passengers at any given time. This limits the potential impact on safety.

The ARAC found the frequency of the types of severe occurrences necessitating the use of supplemental oxygen was around 10^{-8} /flight-hour for causes other than a malfunction of the pressurization system. These malfunctions tend to be slower losses of pressure, or are identified at lower altitudes, and therefore, they are not as critical for this situation. For the purposes of the assessment leading to SFAR 111, the FAA assumed the probability of an occupied lavatory is 50%. The probability of an event when supplemental oxygen is physiologically required is around 5×10^{-9} /flight-hour. Since SFAR 111 was issued, there has been one decompression event due to a mechanical failure involving oxygen mask deployment and emergency descent. In that instance, no occupants were in a lavatory and no persons suffered any injury.

C. Lavatory Oxygen Aviation Rulemaking Committee

⁵ FAA—Regulations and Policies, Aviation Rulemaking Advisory Committee: Transport Airplane and Engine Issue Area Mechanical System Harmonization Working Group, Task 3—Airplane Ventilation Systems (66 FR 39074, July 26, 2001).

As discussed above, the FAA chartered the LOARC to obtain recommendations from the affected public on what the new certification standards for COGs should be, as well as the best way to implement them. Specifically, the LOARC was tasked to:

- (1) Establish criteria for in-service, new production and new type design airplanes, preferably in the form of performance standards, for safe and secure installation of lavatory oxygen systems;
- (2) Determine whether the same criteria should apply to the existing fleet and to new production and type designs;
- (3) Establish what type of safety assessment approach should be used (e.g., in accordance with SAE International Document ARP5577⁶ or § 25.1309), and define the content and procedures of the safety assessment;
- (4) Determine whether tamper resistance, active tamper evidence, or different system design characteristics are equivalent options;
- (5) Develop guidance as necessary to satisfy the recommended criteria for each system design characteristic as appropriate; and
- (6) Consider the pros and cons of different implementation options and recommend a schedule(s) for implementation with the advantages and disadvantages identified.

The LOARC identified five key subjects to focus on to develop its recommendations and fulfill its charter. Those subjects were:

- Design Considerations—identifying and characterizing the design constraints and key factors affecting an installation.

⁶ Aerospace Recommended Practice (ARP) 5577, *Aircraft Lightning Direct Effects Certification*, dated September 30, 2002.

- Security Standards—identifying the necessary components of a secure installation, in terms of both new designs and for retrofit.
- System Performance—identifying the factors that affect system performance in general and how modifications to enhance security might affect system performance.
- Implementation Considerations—identifying the major factors in being able to implement the new requirements into the fleet as expeditiously as practicable, as well as making assessments of how long certain actions will take.
- Other Affected Areas—characterizing the parameters that resulted in the determination of a security vulnerability for lavatory COG installations and establishing criteria for evaluating other installations against those characteristics.

A sub-group was formed for each of the focus areas. Each subject was explored in detail with respect to how it would affect the content of new standards and the ability to implement those new standards into the existing fleet. Using the inputs from the sub-groups, the LOARC made recommendations in a final report, which is available in the docket for this rulemaking.

Some of the significant findings of the LOARC are summarized below. The LOARC concluded that security could be achieved through tamper-resistance alone, through a combination of tamper-resistance and active tamper-evidence (e.g., an alarm), or by switching to a different means of supplying oxygen in lieu of a COG. For new type designs, any of these approaches would be feasible, and some could be adopted with minimal impact on cost or weight.

As discussed below, the FAA is addressing the existing U.S. fleet via an AD. Although this proposal would not affect the existing U.S. fleet, the proposed standards

would likely be used by international aviation authorities in approving installations for the retrofit of those fleets covered by their regulations. The discussion of the LOARC's conclusions regarding the implications for retrofit is included here, because it may aid the international community in reintroducing supplemental oxygen systems into affected airplane lavatories. From the standpoint of the existing U.S. fleet, the LOARC concluded that if a COG were to continue to be used, the majority of installations would likely require using a combination of the tamper-resistance and tamper-evidence approaches.

Incorporation of an active system to provide tamper-evidence would significantly increase complexity, cost, and time in implementing new designs into the existing U.S. fleet compared to other approaches for addressing the security concerns with COGs. This is because such a system must demonstrate a suitable level of reliability and not be susceptible to tampering. It would also require intervention on the part of the crew, which would result in new crew procedures and training. In addition, most of the modification work must be done on the airplane, which can lead to unscheduled time out of service. All of these factors contribute to the complexity of the design, the time it takes to install and certificate the design, and the costs associated with incorporating the design.

The LOARC concluded that switching to a different means of supplying oxygen might be the most efficient solution in a significant number of cases. However, because the COG is an optimized design for this application, there are currently no other types of systems available for the existing fleet. Nonetheless, some design approval holders may take this approach to avoid the issues associated with the active tamper-evidence approach.

The LOARC further concluded that there is limited space available to modify existing designs or to add features. There is some correlation between the size of the

airplane and the space available, but in almost all cases, there are very small tolerances on the size and shape of an oxygen source (COG or other) that will fit. Similarly, although moving the supplemental oxygen supply to a different location may be feasible for new designs, relocating the supplemental oxygen supply in existing fleets is limited by the space available in existing designs. Relocating the supplemental oxygen supply can also complicate activating the oxygen flow, since that is generally accomplished by pulling on the oxygen mask. Nevertheless, the LOARC concluded that there are practical design solutions, and, as discussed below under “Related Actions,” the FAA has accepted the LOARC’s recommendations.

D. New Technology

Irrespective of the method chosen to provide supplemental oxygen, there may be means to indirectly mitigate the space constraints by changing the way in which the supplemental oxygen dosage is measured. Historically, oxygen systems have provided a constant tracheal partial pressure of oxygen in accordance with § 25.1443. In order to maintain the requisite partial pressure, the system supplies oxygen at a given rate for a time period as determined by the routes being flown.

Recent developments in system technology have made a more direct approach feasible for meeting the physiological oxygen requirement. This approach measures the oxygen saturation level in the blood, known as SaO_2 , instead of tracheal partial pressure. Because SaO_2 is more directly indicative of whether adequate oxygen is being supplied, this approach has merit. Further, for a system that can maintain adequate SaO_2 , the total quantity of oxygen may be reduced, making the storage vessel smaller than one based on tracheal partial pressure. Using a smaller storage vessel makes such installations more

practical by utilizing the existing locations. While there is no regulatory change proposed to incorporate SaO_2 , the FAA will consider this approach as a basis for a finding of an equivalent level of safety to the oxygen quantity requirements of § 25.1443, Minimum mass flow of supplemental oxygen.

E. Related Actions

As previously discussed, the FAA began incorporating security measures into the airplane design in 2002. This proposal is keeping with that effort and reflects additional knowledge the FAA has acquired since then. The FAA recently superseded AD 2011-04-09 with AD 2012-11-09, Various Transport Category Airplanes (77 FR 38000, June 26, 2012) to include terminating action for installations meeting requirements of this proposal. To enable affected operators and modifiers to obtain approval of COG installations in advance of finalizing this proposed rulemaking, the FAA has also issued Policy Statement PS-ANM-25-04 regarding COGs using these proposed standards (based on the LOARC recommendations) as guidance for methods of compliance.⁷ The policy statement enables operators to satisfy the requirements in AD 2012-11-09 while at the same time restoring a supplemental oxygen supply to lavatories.

III. Discussion of the Proposal

A. New Requirements for Chemical Oxygen Generator Installations (§ 25.795)

The current requirements for COGs relate primarily to protecting the airplane and passengers from the heat produced by the generators. These standards are in § 25.1450 and will continue to apply. The requirements of § 25.1450 address safety requirements for COGs when correctly installed and operating, as well as predictable failures. These

⁷ PS-ANM-25-04, Chemical Oxygen Generator Installations, dated December 21, 2011.

existing requirements do not consider the deliberate misuse of a COG, or the potential effects of that misuse.

As previously discussed, § 25.795 addresses the incorporation of security measures into an airplane design, following similar standards adopted by ICAO. Currently, § 25.795 does not address COGs, as they were not considered at the time that regulation was adopted. Nevertheless, since the issues of concern stem from security considerations, the FAA has determined that the most logical location for these new COG standards is in § 25.795, Security considerations.

Again, the FAA is proposing standards based on recommendations from the LOARC. This proposal would amend § 25.795 by requiring that each COG or its installation must be designed to be secure by meeting at least one of the following four conditions: (1) provide effective resistance to tampering; (2) provide an effective combination of resistance to tampering and active tamper-evident features; (3) installing in a location or manner where any attempt to access the COG would be immediately obvious; and (4) by a combination of these approaches, provided the Administrator finds it to be a secure installation. These conditions are discussed in further detail below.

There are two basic approaches to providing a secure lavatory COG installation: make a fully tamper-resistant installation, or incorporate a combined tamper-resistance and active tamper-evidence approach. Either of these approaches would be acceptable, but they involve different considerations.

A COG that is inaccessible would be considered a tamper-resistant COG for the purposes of § 25.795(d). This could be accomplished by locating the COG in an inaccessible area, or installing it in a more conventional location in such a way that access

to it is not possible. The ARC considered whether to characterize such an installation as “tamper proof” rather than “tamper resistant.” However, a literal interpretation of “tamper proof” was considered to be too stringent, since there would always be some conceivable, albeit unreasonable, method to overcome tamper-proof features. Nonetheless, where tamper resistance is the sole method of providing security, it is intended that the features be very robust.

If the installation cannot rely solely on a tamper-resistance approach, it is acceptable to incorporate a combined tamper-resistance and active tamper-evidence approach, as previously stated. Using this combined approach would also necessitate changes to crew procedures and concurrent training to provide the same level of security. In this case, it is intervention that ultimately prevents misuse of the generator, so crew involvement is essential. The use of a tamper-evidence approach alone is unacceptable, since this relies entirely on intervention and does not improve the security of the COG itself. Neither the LOARC nor the FAA considers a tamper-evidence approach alone to adequately provide the needed security.

Another method of providing a secure installation is by locating the COG where any attempt to access it would be immediately obvious. In other words, the COG might be in a location where it is accessible, but anyone attempting to gain access to it would be immediately noticed before actually gaining access. This method would not be feasible inside lavatories since they are inherently isolated from view. This method is not the same as a sole tamper-evidence approach, which is only effective after access has begun and relies entirely on subsequent intervention.

There may be any number of combinations used of tamper-resistance and tamper-evidence approaches that would be effective. Applicants would need to make specific proposals and obtain FAA approval for a given approach. In addition, there may be methods of providing a secure installation that involve other elements that would also be acceptable but are not yet defined. The intent of these proposed requirements would allow for those possibilities, while at the same time set a clear performance goal.

In addition, acceptable methods of employing tamper-resistance and tamper-evidence approaches are discussed in proposed AC 25.795, Chemical Oxygen Generator Security Requirements. A copy of AC 25.795 will be placed in the docket for this action.

B. Alternative Approaches

The FAA and the LOARC recognize that the unique nature of COGs drives the identified security vulnerability. Although not proposed in this action, there are other means of delivering supplemental oxygen, such as a stored gas system (either centrally or locally installed), that could eliminate the security vulnerability. These systems are currently used in certain airplane types and could be easily incorporated for new airplane type designs.

C. General Provisions

Although the installation of COGs in lavatories prompted the various rulemaking activities discussed in this proposal, the LOARC recommended applying the new standards to COG installations anywhere on the airplane, and the FAA agrees with this recommendation. The LOARC concluded that if the characteristic that makes the COG a risk exists in locations other than in lavatories, then those locations should also be subject to the same approval criteria. The LOARC did not attempt to identify any specific

locations, but it developed assessment criteria to identify such locations. However, since lavatories are currently without supplemental oxygen, those are the locations with the greatest interest. The LOARC also concluded that the solution for other areas might be different than for lavatories. This information is also included in the above-noted proposed AC 25.795.

D. Operational Requirements

The FAA has superseded AD 2011-04-09, with AD 2012-11-09 which includes requirements to retrofit the fleet of airplanes affected by AD 2011-04-09. Superseding AD 2012-11-09 also applies to airplanes in production for which compliance relief was provided by SFAR 111. The expiration of SFAR 111 will correspond to the compliance date of AD 2012-11-09, since the relief provided by the SFAR will no longer be necessary once operators have complied with that AD. As noted earlier, the FAA has issued Policy Statement PS-ANM-25-04 to facilitate the incorporation of designs meeting these proposed requirements. AD 2012-11-09 references that policy as a potential means of compliance.

The FAA does not intend any further mandate to retrofit oxygen generator systems because only lavatory COG installations that meet the criteria in Policy Statement PS-ANM-25-04 or in this NPRM would be approved. This means that even if there are some changes between this NPRM and the final rule, designs approved prior to the effective date of the final rule, in accordance with the policy, would not be affected. This applies to the design approval, not just to the airplanes on which the design is installed prior to the effective date of the final rule. Therefore, a design approved as an alternative means of compliance to AD 2011-04-09, or as a means of compliance to AD 2012-11-09, will still be approved for installation on airplanes after the effective date of this rule.

All affected airplanes need to be modified either in accordance with the standards in this proposed rule, or via a prior approval as discussed in Policy Statement PS-ANM-25-04 before the expiration date of SFAR 111. For new design approvals on airplanes subject to AD 2012-11-09, or applications for type design changes after the effective date of the final rule, the FAA will use the requirements of the newly adopted § 25.795(d) as the approval basis. For example, if a design is approved per Policy Statement PS-ANM-25-04, and an applicant applies to amend the design after the effective date of the final rule, the amended design must comply with the requirements of § 25.795(d). For transport airplanes that are not subject to proposed AD 2012-NM-004-AD (e.g., all-cargo airplanes), §§ 21.17 and 21.101, as applicable, will be used to determine whether the requirements of § 25.795(d) must be met.

E. Miscellaneous Amendments (§ 25.1450)

Section 25.1450, which contains the general standards for COGs, would be revised to refer to the new § 25.795(d), in addition to the existing standards for COGs.

IV. Regulatory Notices and Analyses

A. Regulatory Evaluation

Changes to Federal regulations must undergo several economic analyses. First, Executive Orders 12866 and 13563 direct that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Public Law 96-354) requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Public Law 96-39) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States

(U.S.). In developing U.S. standards, this Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Public Law 104-4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by state, local, or tribal governments, in the aggregate, or by the private sector, of \$100 million or more annually (adjusted for inflation with base year of 1995). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this proposed rule.

In conducting these analyses, FAA has determined that this proposed rule: (1) would have benefits that justify its costs; (2) would not be an economically "significant regulatory action" as defined in section 3(f) of Executive Order 12866; (3) would not be "significant" as defined in DOT's Regulatory Policies and Procedures; (4) would not have a significant economic impact on a substantial number of small entities; (5) would not create unnecessary obstacles to the foreign commerce of the U.S.; and (6) would not impose an unfunded mandate on state, local, or tribal governments, or on the private sector by exceeding the threshold identified above.

Department of Transportation Order DOT 2100.5 prescribes policies and procedures for simplification, analysis, and review of regulations. If the expected cost impact is so minimal that a proposed or final rule does not warrant a full evaluation, this order allows that a statement to that effect and the basis for it to be included in the preamble if a full regulatory evaluation of the cost and benefits is not prepared. Such a determination has been made for this proposed rule. The reasoning for this determination follows:

This proposed rule would apply only to future type-certificated, large transport airplane models. It would not affect any current airplanes or future airplanes built under an existing type certificate. The proposed requirements are technologically feasible, as evidenced by two new type certificate programs (the Boeing 787 and the Airbus 350) that include designs that would be in compliance with this proposed rule. The FAA does not believe that compliance with the proposed rule for future type certificates would require extensive airplane redesign.

The FAA also believes that there would be little, if any, production airplane cost increases from complying with these proposed requirements. The FAA has learned that the emergency oxygen systems technology used in the Boeing 787 and the Airbus 350 could be transferrable to future type-certificate designs. Further, these technologies provide greater airline operational flexibility because they would allow the airplane to carry variable amounts of oxygen, which is not currently the case with COGs. Finally, future type-certificate designs could still use the COG for emergency oxygen in other parts of the airplane with an alternative oxygen source within the lavatories. The FAA requests comments on its conclusions and these issues.

Total Estimated Benefits and Costs of This Proposed Rule

The primary benefit from this proposed rule is that it would allow the airplane to continue to provide supplemental oxygen to individuals in lavatories during emergencies while ensuring that individuals in lavatories could not tamper with the supplemental oxygen system.

The FAA believes that the proposed rule would impose minimal costs because it would only apply to new type-certificated airplane models so that the manufacturer would

be able to design the most cost-effective emergency oxygen system for the model before construction would start on the first airplane. Again, the Boeing 787 and the Airbus 350 are two new type-certificate projects which include designs for supplemental oxygen systems that would be in compliance with this proposed rule. The FAA believes that similar emergency oxygen systems could be designed for future type-certificated airplanes at a minimal cost.

The FAA requests comments on this initial conclusion of minimal expected costs for future type-certificated airplane models.

Who Is Affected by This Rule?

This rule affects all manufacturers of large transport category, certificated airplanes under part 25.

Source(s) of Information

The primary source of information is the LOARC, which included part 25 airplane manufacturers, other aviation safety regulatory agencies, manufacturers of oxygen generating systems, airlines, a pilot union, and a flight attendant union.

B. Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Public Law 96-354) (RFA) establishes “as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration.” The RFA covers a wide-range of

small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed rule would have a significant economic impact on a substantial number of small entities. If the agency determines that it would, the agency must prepare an initial regulatory flexibility analysis as described in the RFA. However, if an agency determines that a proposed rule would not have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify, and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

The Small Business Administration defines a small airplane manufacturer as one that employs fewer than 1,500 people. As all the affected airplane manufacturers employ more than 1,500 people, this proposed rule would not affect small entities. Therefore, the FAA certifies that this proposed rule, if promulgated, would not have a significant impact on a substantial number of small entities. Specifically, the FAA requests comments on whether the proposed rule would create any specific compliance costs unique to small entities. Please provide detailed economic analysis to support any cost claims. The FAA also invites comments regarding other small-entity concerns with respect to this proposed rule.

C. International Trade Impact Assessment

The Trade Agreements Act of 1979 (Public Law 96-39), as amended by the Uruguay Round Agreements Act (Public Law 103-465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to

the foreign commerce of the United States (U.S.). Pursuant to these Acts, the establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the U.S., so long as the standards have a legitimate domestic objective, such as protection of safety, and does not operate in a manner that excludes imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has assessed the potential effect of this proposed rule and determined that it would improve safety and, therefore, is not an unnecessary obstacle to international trade.

D. Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Public Law 104-4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of \$100 million or more (adjusted annually for inflation with the base year 1995) in any one year by state, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a “significant regulatory action.” The FAA currently uses an inflation-adjusted value of \$143.1 million in lieu of \$100 million. This proposed rule does not contain such a mandate; therefore, the requirements of Title II do not apply.

E. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. The FAA has determined that there would be no new requirement for information collection associated with this proposed rule.

F. International Compatibility and Cooperation

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to conform to International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has reviewed the corresponding ICAO Standards and Recommended Practices and has identified no differences with these proposed regulations.

Executive Order 13609, Promoting International Regulatory Cooperation, promotes international regulatory cooperation to meet shared challenges involving health, safety, labor, security, environmental, and other issues and to reduce, eliminate, or prevent unnecessary differences in regulatory requirements. The FAA has analyzed this action under the policies and agency responsibilities of Executive Order 13609, and has determined that this action would have no effect on international regulatory cooperation.

G. Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this rulemaking action qualifies for the categorical exclusion identified in paragraph 312f and involves no extraordinary circumstances.

V. Executive Order Determinations

A. Executive Order 12866

See the “Regulatory Evaluation” discussion in the “Regulatory Notices and Analyses” section elsewhere in this preamble.

B. Executive Order 13132, Federalism

The FAA has analyzed this proposed rule under the principles and criteria of Executive Order 13132, Federalism. The agency has determined that this action would not have a substantial direct effect on the States, or the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, would not have Federalism implications.

C. Executive Order 13211, Regulations that Significantly Affect Energy Supply, Distribution, or Use

The FAA analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). The agency has determined that it would not be a “significant energy action” under the executive order and would not be likely to have a significant adverse effect on the supply, distribution, or use of energy.

VI. Additional Information

A. Comments Invited

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. The agency also invites comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

The FAA will file in the docket all comments it receives, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, the FAA will consider all comments it receives on or before the closing date for comments. The FAA will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. The agency may change this proposal in light of the comments it receives.

Proprietary or Confidential Business Information: Commenters should not file proprietary or confidential business information in the docket. Such information must be sent or delivered directly to the person identified in the FOR FURTHER INFORMATION CONTACT section of this document, and marked as proprietary or confidential. If submitting information on a disk or CD ROM, mark the outside of the disk or CD ROM, and identify electronically within the disk or CD ROM the specific information that is proprietary or confidential.

Under 14 CFR 11.35(b), when the FAA is aware of proprietary information filed with a comment, the agency does not place it in the docket. It is held in a separate file to which the public does not have access, and the FAA places a note in the docket that it has received it. If the FAA receives a request to examine or copy this information, it treats it as any other request under the Freedom of Information Act (5 U.S.C. 552). The FAA processes such a request under Department of Transportation procedures found in 49 CFR part 7.

B. Availability of Rulemaking Documents

An electronic copy of rulemaking documents may be obtained from the Internet by—

1. Searching the Federal eRulemaking Portal (<http://www.regulations.gov>);
2. Visiting the FAA's Regulations and Policies web page at http://www.faa.gov/regulations_policies or
3. Accessing the Government Printing Office's web page at <http://www.gpoaccess.gov/fr/index.html>.

Copies may also be obtained by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267-9680. Commenters must identify the docket or notice number of this rulemaking.

All documents the FAA considered in developing this proposed rule, including economic analyses and technical reports, may be accessed from the Internet through the Federal eRulemaking Portal referenced in item (1) above.

List of Subjects

14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The Proposed Amendments

In consideration of the foregoing, the Federal Aviation Administration proposes to amend chapter I of Title 14, Code of Federal Regulations as follows:

PART 25—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES

1. The authority citation for part 25 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702 and 44704.

2. Amend § 25.795 by redesignating paragraphs (d) and (e) as (e) and (f) respectively, and by adding a new paragraph (d) to read as follows:

§ 25.795 Security considerations.

* * * * *

(d) Each chemical oxygen generator or its installation must be designed to be secure from deliberate manipulation by one of the following:

(1) By providing effective resistance to tampering,

(2) By providing an effective combination of resistance to tampering and active tamper-evident features,

(3) By installation in a location or manner whereby any attempt to access the generator would be immediately obvious, or

(4) By a combination of approaches specified in paragraphs (d)(1), (d)(2) and (d)(3) of this section that the Administrator finds provides a secure installation.

* * * * *

3. Amend § 25.1450 by adding a new paragraph (b)(3) to read as follows:

§ 25.1450 Chemical oxygen generators.

* * * * *

(b) * * *

(3) Except as provided in SFAR 109, each chemical oxygen generator installation

must meet the requirements of § 25.795(d).

* * * * *

Issued in Washington, DC, on January 3, 2013.

Dorenda D. Baker
Director, Aircraft Certification Service

[FR Doc. 2013-00238 Filed 01/08/2013 at 8:45 am; Publication Date: 01/09/2013]